Amendments to the Claims:

Claims 1-88 (cancelled).

89. (Currently Amended) The method according to claim [88] 90, wherein the delivery step is carried out under conditions which provide stable patterns with nanolithographic resolution.

90. (Currently Amended) A direct-write nanolithographic method comprising:

providing a solid substrate:

providing an atomic force microscope tip having a patterning compound coated thereon; and

delivering the patterning compound from the tip to the substrate so as to produce a stable pattern on the solid substrate[[. The method according to claim 88]], wherein the delivery step is carried out with flow of the patterning compound from the tip to the substrate by capillary action.

91. (Currently Amended) The method according to claim [88] 90, wherein the delivering step is carried out by holding the tip in contact with the substrate surface without lateral movement.

92. (Currently Amended) The method according to claim [[88]] 90, wherein the delivering step is carried out by sweeping the tip on the substrate surface.

93. (Currently Amended) The method according to claim [[88]] 90, wherein the delivering step is carried out by raster scanning the tip on the substrate surface.

94. (Currently Amended) The method according to claim [[88]] 90, wherein the delivery step is carried out so that the tip is held in contact with the substrate surface so that the patterning compound evenly flows in all directions from the tip to the substrate surface.

95. (Currently Amended) The method according to claim [[88]] 90, wherein the delivering is carried out with use of an isolation chamber.

96. (Currently Amended) The method according to claim [[88]] 90, wherein the delivering step is carried out with use of measurement of relative humidity.

97. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a dot.

98. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a dot having a diameter of about 1.6 microns or less.

99. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a dot having a diameter of about 0.88 microns or less.

100. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a dot having a diameter of about 0.66 microns or less.

101. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises at least one dot which has uniform appearance.

102. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises an array of dots.

103. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a line.

104. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises individual lines.

105. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises at least one line with nanometer width.

106. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises intersecting lines.

107. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises at least one line having a line width of less than about 100 nm.

108. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises at least one line having a line width of about 30 nm to about 100 nm.

109. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a monolayer.

110. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a self-assembled monolayer.

111. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises a self-assembled monolayer which has a lattice parameter.

112. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern is formed by scanning the tip in a line repeatedly.

113. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern can be imaged by lateral force microscopic imaging.

114. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises dots spaced about 0.54 microns apart or less.

115. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises submicrometer dimension.

116. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound anchors to the substrate and forms a stable pattern by chemisorption to the substrate.

117. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound has a chemical affinity for the substrate.

118. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is hydrophobic.

119. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound comprises molecules.

120. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is a sulfur-containing compound.

121. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is a thiol compound.

122. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an alkanethiol compound.

123. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an arylthiol compound.

124. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is a silane compound.

125. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an amine compound.

126. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an alkylamine compound.

127. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an arylamine compound.

128. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is a nucleic acid compound.

129. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is an oligonucleotide.

130. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is a DNA compound.

Claims 131 and 132 (cancelled).

133. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is coated onto the tip by dipping the tip into a solution of the patterning compound.

134. (Currently Amended) The method according to claim [[88]] 90, wherein the patterning compound is coated onto the tip only once.

135. (Currently Amended) The method according to claim [[88]] 90, wherein the method is used to selectively place different types of molecules at specific sites within a particular type of nanostructure.

136. (Currently Amended) The method according to claim [[88]] 90, wherein the method is repeated with a different patterning compound.

137. (Currently Amended) The method according to claim [[88]] 90, wherein the method is repeated with two or more different patterning compounds being transported to the same substrate.

138. (Currently Amended) The method according to claim [[88]] 90, wherein the method is used to prepare an etching resist.

139. (Currently Amended) The method according to claim [[88]] 90, wherein the method is used for surface functionalization.

140. (Currently Amended) The method according to claim [[88]] 90, wherein the method is used for functionalization of a nanoscale device.

141. (Currently Amended) The method according to claim [[88]] 90, wherein the method is used for gene detection.

142. (Currently Amended) The method according to claim [[88]] 90, wherein the substrate comprises a thin film.

143. (Currently Amended) The method according to claim [[88]] 90, wherein the substrate smoothness is controlled to improve resolution.

144. (Currently Amended) The method according to claim [[88]] 90, wherein the contacting is characterized by a tip-substrate contact time which is controlled to improve resolution.

145. (Currently Amended) The method according to claim [[88]] 90, wherein the rate of transport of the patterning compound from the tip to the substrate is controlled to improve resolution.

146. (Currently Amended) The method according to claim [[88]] 90, wherein the relative humidity is controlled during delivery to improve resolution.

147. (Currently Amended) The method according to claim [[88]] 90, wherein tip sharpness is controlled to improve resolution.

148. (Currently Amended) The method according to claim [[88]] 90, wherein the delivering is carried out with use of an isolation chamber and with use of measurement of relative humidity.

149. (Previously Presented) The method according to claim 148, wherein the pattern comprises submicrometer dimension.

150. (Previously Presented) The method according to claim 149, wherein the pattern comprises a self-assembled monolayer.

151. (Previously Presented) The method according to claim 150, wherein the pattern comprises a dot or a line.

152. (Previously Presented) The method according to claim 151, wherein the pattern comprises an array.

153. (Currently Amended) The method according to claim [[88]] 90, wherein the pattern comprises submicrometer dimension, and the patterning compound anchors to the substrate and forms a stable pattern by chemisorption to the substrate.

154. (Previously Presented) The method according to claim 153, wherein the pattern comprises a dot or line.

155. (Previously Presented) The method according to claim 154, wherein the method is repeated with a different patterning compound.

156. (Previously Presented) The method according to claim 155, wherein the relative humidity is controlled during delivery.

Claim 157 (cancelled).

158. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering step is carried out under conditions which provide stable nanostructure patterns with nanolithographic resolution.

159. (Currently Amended) A direct-write nanolithographic method comprising:

providing a solid substrate;

providing a tip having an ink thereon; and

delivering the ink from the tip to the substrate so as to produce a stable nanostructure on the solid substrate [[The method according to claim 157]], wherein the delivering step is carried out with flow of the ink from the tip to the substrate by capillary action.

160. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering step is carried out by holding the tip in contact with the substrate surface without lateral movement.

161. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering step is carried out by sweeping the tip on the substrate surface.

162. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering step is carried out by raster scanning the tip on the substrate surface.

163. (Currently Amended) The method according to claim [[157]] 159, wherein the delivery step is carried out so that the tip is held in contact with the substrate surface so that the ink evenly flows in all directions from the tip to the substrate surface.

164. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering is carried out with use of an isolation chamber.

165. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering step is carried out with use of measurement of relative humidity.

166. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a dot.

167. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a dot having a diameter of about 1.6 microns or less.

168. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a dot having a diameter of about 0.88 microns or less.

169. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a dot having a diameter of about 0.66 microns or less.

170. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises at least one dot which has uniform appearance.

171. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises an array of dots.

172. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a line.

173. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises individual lines.

174. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises at least one line with nanometer width.

175. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises intersecting lines.

176. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises at least one line having a line width of less than about 100 nm.

177. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises at least one line having a line width of about 30 nm to about 100 nm.

178. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a monolayer.

179. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a self-assembled monolayer.

180. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises a self-assembled monolayer which has a lattice parameter.

181. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure is formed by scanning the tip in a line repeatedly.

182. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure can be imaged by lateral force microscopic imaging.

183. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure is part of a pattern which comprises dots spaced about 0.54 microns apart or less.

184. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises submicrometer dimension.

185. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a patterning compound which anchors to the substrate and forms a stable pattern by chemisorption to the substrate.

186. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a patterning compound which has a chemical affinity for the substrate.

187. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a patterning compound which is hydrophobic.

188. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises molecules.

189. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a sulfur-containing compound.

190. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a thiol compound.

191. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an alkanethiol compound.

192. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an arylthiol compound.

193. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a silane compound.

194. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an amine compound.

195. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an alkylamine compound.

196. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an arylamine compound.

197. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a nucleic acid compound.

198. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises an oligonucleotide.

199. (Currently Amended) The method according to claim [[157]] 159, wherein the ink comprises a DNA compound.

Claims 200-201 (cancelled).

202. (Currently Amended) The method according to claim [[157]] 159, wherein the ink is coated onto the tip by dipping the tip into a solution of ink.

203. (Currently Amended) The method according to claim [[157]] 159, wherein the ink is coated onto the tip only once.

204. (Currently Amended) The method according to claim [[157]] 159, wherein the tip is a microscopic tip.

205. (Currently Amended) The method according to claim [[157]] 159, wherein the tip is an atomic force microscope tip.

206. (Currently Amended) The method according to claim [[157]] 159, wherein the delivering is carried out with use of an isolation chamber and with use of measurement of relative humidity.

207. (Previously Presented) The method according to claim 206, wherein the nanostructure comprises submicrometer dimension.

208. (Previously Presented) The method according to claim 207, wherein the nanostructure comprises a self-assembled monolayer.

209. (Previously Presented) The method according to claim 208, wherein the nanostructure comprises a dot or a line.

210. (Previously Presented) The method according to claim 209, wherein the nanostructure is part of an array.

211. (Currently Amended) The method according to claim [[157]] 159, wherein the nanostructure comprises submicrometer dimension, and the ink comprises a patterning compound which anchors to the substrate and forms a stable pattern by chemisorption to the substrate.

212. (Previously Presented) The method according to claim 211, wherein the nanostructure comprises a dot or line.

213. (Previously Presented) The method according to claim 212 , wherein the method is repeated with a different ink.

214. (Previously Presented) The method according to claim 213, wherein the relative humidity is controlled during delivery.

215. (Previously Presented) A method of direct-write nanolithography comprising transporting molecules in a positive printing mode from an atomic force microscope tip to a solid substrate of interest by capillary transport, wherein the molecules have a chemical affinity for the solid substrate.

Claim 216 (cancelled).

217. (Previously Presented) A method comprising:

coating an AFM tip with an ink;

bringing the coated AFM tip into contact with a substrate in the presence of a transport medium which forms a meniscus;

writing with the tip.

Claim 218 (cancelled).

Please add the following new claims 219- 290

219. (new) The method according to claim 215, wherein the molecules chemisorb to the substrate.

220. (new) The method according to claim 215, wherein the method is repeated with different molecules.

221. (new) The method according to claim 215, wherein the method is repeated with different molecules on the same solid substrate.

222. (new) The method according to claim 215, wherein the method is repeated to form the same patterns.

223. (new) The method according to claim 215, wherein the method is repeated to form different patterns.

224. (new) The method according to claim 215, wherein the method is repeated with multiple AFM tips in a device.

225. (new) The method according to claim 215, wherein the method is repeated with multiple AFM tips in a device and different molecules.

226. (new) The method according to claim 215, wherein the AFM tip is a hydrophobic AFM tip.

227. (new) The method according to claim 215, wherein the method is carried out in an isolation chamber.

228. (new) The method according to claim 215, wherein the method is carried out with measurement of relative humidity.

229. (new) The method according to claim 215, wherein the method is carried out in an isolation chamber, and with measurement of relative humidity.

230. (new) The method according to claim 215, wherein the tip is held in contact with the solid substrate.

231. (new) The method according to claim 215, wherein the tip is scanned over the solid substrate.

232. (new) The method according to claim 215, wherein the transporting step is carried out with a controlled tip-substrate contact time.

233. (new) The method according to claim 215, wherein the transporting step is carried out with a controlled tip-substrate scan speed.

234. (new) The method according to claim 215, wherein the substrate is gold.

235. (new) The method according to claim 215, wherein the substrate is silicon.

236. (new) The method according to claim 215, wherein the molecules are silanes.

237. (new) The method according to claim 215, wherein the molecules are thiols.

238. (new) The method according to claim 215, wherein the molecules are nucleic acid.

239. (new) The method according to claim 215, wherein the molecules are DNA.

240. (new) The method according to claim 215, wherein the transported molecules are molecules applicable as a resist.

241. (new) The method according to claim 215, wherein the transported molecules are molecules applicable for surface functionalization.

242. (new) The method according to claim 215, wherein the transported molecules are molecules applicable in gene detection.

243. (new) The method according to claim 215, wherein the transported molecules are molecules applicable in molecular electronics.

244. (new) The method according to claim 215, wherein the transported molecules form a monolayer.

245. (new) The method according to claim 217, wherein the ink chemisorbs to the substrate.

246. (new) The method according to claim 217, wherein the method is repeated with different inks.

247. (new) The method according to claim 217, wherein the method is repeated with different inks on the same substrate.

248. (new) The method according to claim 217, wherein the method is repeated to form the same patterns.

249. (new) The method according to claim 217, wherein the method is repeated to form different patterns.

250. (new) The method according to claim 217, wherein the method is repeated with multiple AFM tips in a device.

251. (new) The method according to claim 217, wherein the method is repeated with multiple AFM tips in a device and different molecules.

252. (new) The method according to claim 217, wherein the AFM tip is a hydrophobic AFM tip.

253. (new) The method according to claim 217, wherein the method is carried out in an isolation chamber.

254. (new) The method according to claim 217, wherein the method is carried out with measurement of relative humidity.

255. (new) The method according to claim 217, wherein the method is carried out in an isolation chamber, and with measurement of relative humidity.

256. (new) The method according to claim 217, wherein the tip is held in contact with the substrate for a set period of time.

257. (new) The method according to claim 217, wherein the tip is scanned over the substrate.

258. (new) The method according to claim 217, wherein the writing step is carried out with a controlled tip-substrate contact time.

259. (new) The method according to claim 217, wherein the writing step is carried out with a controlled tip-substrate scan speed.

260. (new) The method according to claim 217, wherein the substrate is gold.

261. (new) The method according to claim 217, wherein the substrate is silicon.

262. (new) The method according to claim 217, wherein the ink is a silane ink.

263. (new) The method according to claim 217, wherein the ink is a thiol ink.

264. (new) The method according to claim 217, wherein the ink is nucleic acid ink.

265. (new) The method according to claim 217, wherein the ink is a DNA ink.

266. (new) The method according to claim 217, wherein the ink is an oligonucleotide ink.

267. (new) The method according to claim 217, wherein the ink is a etch resist ink.

268. (new) The method according to claim 217, wherein the ink form a monolayer.

269. (new) A method of nanolithography comprising:

providing a substrate;

providing a scanning probe microscope tip;

coating the tip with a patterning compound; and

using the coated tip to apply the compound to the substrate so as to produce a desired pattern, wherein the compound is a nucleic acid compound, an oligonucleotide, or a DNA compound.

270. (new) The method according to claim 269, wherein the compound is a nucleic acid compound.

271. (new) The method according to claim 269, wherein the compound is an oligonucleotide.

272. (new) The method according to claim 269, wherein the compound is a DNA compound.

273. (new) A direct-write nanolithographic method comprising:

providing a solid substrate;

providing an atomic force microscope tip having a patterning compound thereon;

delivering the patterning compound from the tip to the substrate so as to produce a stable pattern on the solid substrate, wherein the compound is a nucleic acid compound, an oligonucleotide, or a DNA compound.

274. (new) The method according to claim 273, wherein the compound is a nucleic acid compound.

275. (new) The method according to claim 273, wherein the compound is an oligonucleotide.

276. (new) The method according to claim 273, wherein the compound is a DNA compound.

277. (new) A direct-write nanolithographic method comprising:

providing a solid substrate;

providing a tip having an ink thereon; and

delivering the ink the tip to the substrate so as to produce a stable nanostructure on the solid substrate, wherein the ink is a nucleic acid ink, an oligonucleotide ink, or a DNA ink.

278. (new) The method according to claim 277, wherein the ink is a nucleic acid ink.

279. (new) The method according to claim 277, wherein the ink is an oligonucleotide ink.

280. (new) The method according to claim 277, wherein the ink is a DNA ink.

281. (new) A method of nanolithography comprising:

providing a substrate;

providing a scanning probe microscope tip;

coating the tip with a patterning compound; and

using the coated tip to apply the compound to the substrate so as to produce a desired pattern, wherein the compound is a silane compound or an amine compound.

282. (new) The method according to claim 281, wherein the compound is a silane compound.

283. (new) The method according to claim 281, wherein the compound is an amine compound.

284. (new) The method according to claim 281, wherein the compound is an alkylamine or arylamine compound.

285. (new) A direct-write nanolithographic method comprising:

providing a solid substrate;

providing an atomic force microscope tip having a patterning compound thereon;

delivering the patterning compound from the tip to the substrate so as to produce a stable pattern on the solid substrate, wherein the compound is a silane compound or an amine compound.

286. (new) The method according to claim 285, wherein the compound is a silane compound.

287. (new) The method according to claim 285, wherein the compound is an amine compound.

288. (new) The method according to claim 285, wherein the compound is an alkylamine or arylamine compound.

289. (new) A direct-write nanolithographic method comprising:

providing a solid substrate comprising gold;

providing a tip having an ink thereon; and

delivering the ink the tip to the substrate so as to produce a stable nanostructure on the solid substrate.

290. (new) A direct-write nanolithographic method comprising:

providing a solid substrate comprising silicon;

providing a tip having an ink thereon; and

delivering the ink the tip to the substrate so as to produce a stable nanostructure on the solid substrate.